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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,834	09/17/2003	Jae-Hwan Hyun	1349.1295	2695
21171	7590	05/05/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			MORRISON, THOMAS A	
			ART UNIT	PAPER NUMBER
			3653	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/663,834		HYUN, JAE-HWAN	
	<b>Examiner</b>		<b>Art Unit</b>	
	Thomas A. Morrison		3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claims 2, 7 and 17 are objected to because of the following informalities:  
(1) "lever" in line 10 of claim 2 should be -- levers --; (2) "The paper detecting apparatus" in line 1 of claim 7 should be -- A paper detecting apparatus --; and (3) "limited switch" in line 2 of claim 17 should be -- limit switch --. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the paper" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the paper" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the paper cassette" in line 12. There is insufficient antecedent basis for this limitation in the claim.

With regard to claim 7 and its dependent claims 8-10, it is unclear what elements make up the recited "paper sensor". Are the first, second and third levers part of the paper sensor? For example, sensor (120) in Fig. 2 of the instant application does not

appear to sense paper. Rather, sensor (120) appears to sense the presence or absence of one of the levers. As such, the combination of the levers and the sensor (120) appears to be what senses the paper.

Claim 11 recites the limitation "the first slot" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the duplex printing path" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the paper sensor" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the last paper" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Also, independent claim 11 and claim 22, which depends from claim 11, both recite "a slot". Accordingly, it is unclear which slot is referenced by the recited "the slot" in line 3 of claim 22.

Claim 23 recites the limitation "the duplex printing path" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the duplex printing path" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 33, it is unclear what is meant by the recited "duplex printing apparatus".

Claim 34 recites the limitation "the duplex printing paper shaft" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5 and 6, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's admitted prior art in Fig.1 and the background section of the instant application.

Regarding claim 1, Fig. 1 shows a paper detecting apparatus (including 10, 15, and 13) of an image forming machine (Fig. 1) having a duplex printing function (i.e., see numbered paragraph [0004] of instant application) including

an actuator (including 13) pivotably disposed above a paper feed cassette (30) and below a duplex printing paper path (40), that is moved by the paper; and

a paper sensor (15) disposed next to the actuator (including 13) that senses movement of the actuator (including 13) and generates a signal, wherein the actuator (including 13) pivots in a predetermined angle when no paper is stacked in the paper feed cassette (30), and the paper sensor (15) generates a signal upon sensing the actuator (including 13) pivot.

Regarding claim 5, Fig. 3 shows a stopper (34) limiting pivoting space of the actuator (including 13).

Regarding claim 6, the numbered paragraph [0009] discloses that the paper sensor (15) is a photo sensor.

4. Claims 1, 5 and 6, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,292,636 (Kwon).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Figs. 1-4 show a paper detecting apparatus (including 10, 20, 30 and 40) of an image forming machine (Fig. 1) having a duplex printing function including

an actuator (including 20, 30 and 40) pivotably disposed above a paper feed cassette (110) and below a duplex printing paper path, that is moved by the paper; and

a paper sensor (10) disposed next to the actuator (including 20, 30 and 40) that senses movement of the actuator (including 20, 30 and 40) and generates a signal, wherein the actuator (including 20, 30 and 40) pivots in a predetermined angle when no

paper is stacked in the paper feed cassette (110), and the paper sensor (10) generates a signal upon sensing the actuator (including 20, 30 and 40) pivot.

Regarding claim 5, Fig. 3 shows a lower surface of element (10) that is a stopper limiting pivoting space of the actuator (including 20, 30 and 40).


Regarding claim 6, column 4, lines 40-45 disclose that the paper sensor (10) can be a photo sensor.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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